



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|--|-------------|----------------------|---------------------|------------------|
| 10/659,653 | 09/09/2003 | Francoise Le Bolzer | PF020108 | 3654 |
| 24498 | 7590 | 04/25/2006 | EXAMINER | |
| THOMSON LICENSING INC. PATENT OPERATIONS PO BOX 5312 PRINCETON, NJ 08543-5312 | | | DINH, TRINH VO | |
| | | | ART UNIT | PAPER NUMBER |
| | | | 2821 | |

DATE MAILED: 04/25/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

66

| | | | |
|------------------------------|--------------------------------------|---|--|
| Office Action Summary | Application No. 10/659,653 | Applicant(s) LE BOLZER ET AL. | |
| | Examiner Trinh Vo Dinh | Art Unit 2821 | |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 28 February 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-9 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-9 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 14 October 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

This is a response to amendment filed 02/28/2006. Applicant's arguments regarding amended claims 1-5 with respect to reference Kundu are not deemed to be persuasive.

Therefore, amended claims 1-5 based on Kundu are rejected for the following reasons.

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless -

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claims 1-5 are rejected under 35 U.S.C. 102(e) as being anticipated by Kundu et al (US 6,621,381 B1 of record).

With respect to claim 1, Kundu discloses, in Figs. 15 or 10, dielectric resonator antenna (abstract) comprising a block of dielectric material (1500) of specific permittivity ϵ_r , said block having a first face (1502 or 102) intended to be mounted on an earth plane and covered with a first metallic layer (col. 15, lines 30-49 or 106a), wherein at least one second face (the face 1502c or 1503 in Fig. 15, or a front side in Fig. 10a) perpendicular to the first face is covered with a second metallic layer (1502c or 1503 in Fig. 15, col. 15, lines 55-59, or 106 in Fig. 10a) contacting the first metallic layer (col. 15, lines 30-49 or 106a) cover the first face (1502 in Fig. 15 or 102 in Fig. 10), the second metallic layer (1502c, 1503 in Fig. 15 or 106a in Fig. 10b) covering the second face extending over a width less than the width of the second face and over a height less than or equal to the height of the second face. (Note that a limitation of "operating

Art Unit: 2821

according to transverse electric (TE) mode” is appeared in the preamble. Therefore, it cannot rely upon to distinguish over the cited art. It has been held that a preamble is denied the effect of a limitation wherein the claim following the preamble is a self-contained description of the structure not depending for completeness upon the introductory clause).

Respecting claim 2, Kundu discloses, in Figs. 10a, 10b, the second metallic layer (106 in Figs. 10a, 10b) covering the second face being centered with respect to the width of the second face.

With respect to claims 3-5, Kundu discloses, in Fig. 15, the second metallic layer (1503) covering the second face being extended via a third metallic layer (1501, col.5, lines 55-67) covering a third face (the face has layer 1501) parallel to the first face (face of layer 1502), the third metallic layer (1501) covering the third face stretching over a width less than the length of the third face, and the width of the third metallic layer (1501) covering the third face is different from the width of the second metallic layer (1503) covering the second face.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 6-9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kundu in view of Adachi et al (US Patent 6,198,450 B1).

With respect to claim 6, Kundu discloses a dielectric resonator comprising a block of dielectric material having a first metallic layer which covers the first face of the block and the

Art Unit: 2821

second metallic layer cover that cover the second face of the block as discussed above in claim 1.

However, Kundu does not suggest the dielectric resonator comprising a slot and microstrip.

Adachi discloses, in Fig. 25, a slot (115a) provided in a substrate (112) and a microstrip line

(114) provided on the substrate opposite to the face forming ground plane (col. 17, line 67)

crossing the slot (115a). It would have been obvious to one having ordinary skill in the art at the

time the invention was made to excite Kundu's dielectric resonator using the feeder circuit as

taught by Adachi because using microstrip feeding line for feeding antennas will eliminated an

use of coaxial feeder so that the low cost of manufacture will be obtained.

With respect to claims 7-9, Kundu discloses the claimed subjected matters as discussed above in claims 3-5 respectively.

Response to the Arguments

5. With respect to claim 1, Applicant argues, in page 4 of the remark, that the Kundu reference fails to teach a new limitation of "operating according to transverse electric (TE) mode". The limitation has been considered in the rejection as discussed above in paragraph 2. In addition, the limitation of "operating according to transverse electric (TE) mode" is a functional recitation. Therefore, it cannot rely upon to define over the cited art that satisfies the claimed structural limitations. In order to distinguish from the cited art, the functional recitation must be supported with a structure for performing the claimed functional limitations. Since Kundu discloses every feature of the claimed invention, 102 rejection of amended claim 1 is proper.

With respect to the rejections of dependent claims 2-5 which employing the additional teaching of Kundu, Applicant has not offer any specific argument thereagainst. Accordingly, no further comments concerning the rejections of the dependent claims are necessary.

Conclusion

6. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

Inquiry

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Trinh Vo Dinh whose telephone number is (571) 272-1821. The examiner can normally be reached on Monday to Friday from 9:30AM to 6:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Tim Callahan, can be reached on (571) 272-1740. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR

Art Unit: 2821

system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Art unit 2821

Art unit 2821

April 20, 2005

TRINH DINH
PRIMARY EXAMINER

A handwritten signature in black ink, appearing to read 'Trinh Dinh', with a long horizontal flourish extending to the right.